REMARKS/ARGUMENTS

This is in response to the official action dated July 1, 2008. Claims 2, 6 and 10 have been amended. No new matter has been added. Claims 1-14 remain pending in this application with claims 1 and 10 being the only independent claims. Reconsideration in view of the amendments and arguments is respectfully requested.

Claim Objections

Claim 2 is objected to because it recites "wherein the additional information has a position value of height h x width b of the image array + k," but the variable k has not been defined. Applicant has amended claim 2 to clearly state "wherein k is a predefined value that indicates that a texture is included." Support for this added text is found in paragraph [00026] of the application, as originally filed. No mew matter has been added. Withdrawal of the claim objection in view of the amendment is therefore requested.

Claim rejections under 35 USC § 112, first paragraph

The Examiner rejected claims 10-14 as failing to comply with the written description requirement. Specifically, the Examiner asserts that the specification, as originally filed, lacks prior support for the limitation "arranging the additional information at position values of the image array that are not assigned to the pixel groups and compressing the image array containing both the image data of the pixel groups and additional information," as found in claim 10. Claim 10 has been amended to overcome this rejection to state "arranging the additional information at position values outside the range of the image array." Support for the amendment to the specification is found in paragraphs [0008], [00010], [00025] and claim 1, of the application as originally filed. Withdrawal of the claim rejection in view of the amendment to claim 10 is therefore requested.

Prior Art Claim Rejections

Claims 10-14 have not been rejected over the prior art of record.

Claims 1, 5, and 7-9 are rejected as anticipated by Christopoulos et al (US 6,961,754).

Claims 1, 2, and 7 are rejected as anticipated by Shiomoto et al. (US Patent Publication No. 2002/0053049).

Claims 3 and 4 are rejected as obvious over Christopoulos et al. in view of Xie et al. ("Feature representation and Compression for Content-Based Retrieval," H. Xie and A. Ortega, Proc. Vol. SPIE 4310, pp. 111-122 (2000)).

Claims 3 and 6 are rejected as obvious over Shiomoto et al. in view of Kobayashi et al. (US Patent No. 6,493,692).

Applicant respectfully traverses the prior art rejections for the reasons described below.

Independent Claim 1

A. §102(e) Rejection as Anticipated by Christopoulos et al.

Claim 1 is expressly directed to "compressing data by way of a prioritizing pixel transmission." (emphasis added) Christopoulos et al. is directed to a conversational multimedia service that permits each of two or more computer or computer based telecommunication devices to effectively manipulate, share and exchange multimedia objects (e.g., still images, video objects, text objects, audio objects) stored in a multimedia database, despite the existence of different user preferences and the fact that the one more computer and/or computer based telecommunication devices may exhibit significantly different network and/or terminal capabilities. (Col. 3, ll. 49-57) In short the conversational multimedia session involves the manipulation of a media object by one end-user prior to making that object available to one or more other end-users. (Col. 7, ll. 64-66) "Thus, in accordance with exemplary embodiments of the present invention, the media server adapts the manipulated object, or causes the object to be adapted, in accordance with the IAS and the TSS, to best satisfy the user preference and terminal and network capabilities associated with U_B, prior to making the object available to U_B." (Col. 8,

ll. 3-8)

The only mention of prioritization is with respect to selection by U_A of ROIs by the U_A assigning a significance value to each selected ROI. "[A]n IAS [Information Adaptive Service] may now be employed to _prioritize_ and/or limit the number of ROIs that were selected by U_A. As explained previously, the IAS performs this function based on the user preference information that resulted from U_A selecting the one or more ROIs in step 502 and assigning each a significance value in step 503." (Col. 11, ll. 36-41) This "significance value" assigned by the UA to prioritize the ROIs selected by the UA has nothing whatsoever to do with data compression. Instead, the only value that is taken into consideration during encoding (data compression) is the "scaling value," but this value is not prioritized. "The TSS then encodes the image data, as indicated in step 505, where encoding may, once again, be achieved in accordance with the ROI coding feature of the JPEG2000 standard. As one skill in the art will readily appreciate, encoding will take into account the above-identified _scaling values_." (Col. 12, ll. 7-12) Therefore, there is no disclosure to support that the prioritization of the ROIs as specified by the "significance value" is employed or taken into consideration during data compression (encoding), which would be necessary to read on claim 1.

In addition, claim 1 is further distinguishable over the prior art in that it calls for the step of "_transmitting_ the [compressed] data and the additional information." Accordingly, the image data of the pixel groups and the additional information are _both compressed_. In contrast, Christopoulos et al. discloses only encoding (compression) of the image data (Col. 12, ll. 7-10), but neither discloses nor suggests that additional information is also compressed, as found in claim 1. It is the Examiner's position that the "significance values" and "CONTENT DESCRIPTIONS" read on the claimed "additional information." However, neither the "significance values" nor the "CONTENT DESCRIPTIONS" are compressed along with the image data.

The transmitting step of claim 1 is further distinguishable over the prior art in that it specifies "wherein the additional information is placed at position values that do not occur in the data, and is located instead outside an area of the image array." Thus, during transmission, the additional information is placed at position values that do not occur in the compressed data and is located instead outside an area of the image array. The Examiner maintains that this limitation is taught by Christopoulos et al. Specifically, the Examiner states that this claimed step is taught by Christopoulos et al. (Col. 12, lines 59-67). The passage in question reads "In accordance with this second scenario, and as illustrated in FIG. 6, the following operations are performed at the terminal employed by the sending end-user U_A. In step 601, U_A obtains the terminal capabilities associated with terminal B, in accordance with the appropriate protocol (e.g., CC/PP or SIP). U_A then selects one or more ROIs from the image and assigns to each a significance value, as shown in step 602. The image is then compressed, for example, using the JPE2000 standard, as shown in step 603. The compressed data, along with the significance value associated with each of the selected ROIs, and the information and/or data that defines the capabilities of terminal B are multiplexed into a bitstream, where the significance values and the terminal B capability information may be included as metadata, as for example, in the MPEG-7 standard. In step 604, the bitstream is transmitted to the transcoder." (emphasis added). Claim 1 expressly calls for "wherein the additional information is placed at position values that do not occur in the data, and is located instead outside an area of the image array." The passage cited by the Examiner is silent as to the positioning of the significance value (which the Examiner maintains is analogous to the claimed "additional data"). Instead, the patent merely discloses that the significance value is multiplexed with the compressed data to generate a bitstream. There is no disclosure or suggestion as to the location of the significance data relative to the image array, much less, as found in claim 1 that the additional data be located outside an area of the image array.

In addressing this issue the Examiner refers to another passage in Christopoulos et al. that states "The block labeled 'CONTENT DESCRITPIONS' represents the descriptions, i.e., meta-data associated with the various media objects stored in the content storage block. The content descriptions block might contain, for example, MPEG-7 description or JPEG2000 descriptions." (Col. 8, ll. 25-29) Thereafter, the Examiner concludes "clearly the compressed image data does not include the additional information such as significance values and terminal B capabilities and

therefore these additional information do not occur in the data and is located instead outside an area of the image array." (July 1, 2008 Non-Final Office Action: p. 5, ll. 16-18) Previously the Examiner asserted that the "significance value" which is assigned by U_A is analogous to the claimed "additional information." Now, the Examiner appears to be referring to the 'CONTENT DESCRIPTIONS' as reading on the claimed "additional information." At no place in the patent is the significance value associated with the CONTENT DESCRIPTIONS. Therefore, it is unclear which information in the patent reads on the claimed "additional information." Furthermore, Applicant disagrees with the Examiner's assertion that the CONTENT DESCRIPTIONS and associated disclosure teaches that the "additional information is located outside the area of the image array." Christopoulos et al. clarifies that "The block labeled 'CONTENT DESCRIPTIONS' represents one or more <u>databases</u> that contain descriptive information about the stored multimedia objects, such as MPEG descriptions associated with video objects, or JPEG descriptions associated with the still image objects." (Col. 7, ll. 50-56)(emphasis added) Thus, no where in the patent is there any disclosure or suggestion of the 'CONTENT DESCRIPTIONS' being "located outside the area of the image array," as found in claim 1.

B. §102(e) Rejection as Anticipated by Shiomoto et al.

Claim 1 is distinguishable over the prior art in that it calls for the step of "<u>transmitting</u> the [compressed] data and the additional information." Accordingly, both the image data of the pixel groups and the additional information are both compressed. The Examiner maintains that the header portion H_A of the compressed image data S1A represents the area outside the image array in which the claimed "additional information" is stored. The only thing stored in the header portion H_A is the priority information S40, and thus the Examiner appears to infer that the priority information S40 reads on the claimed "additional information." However, claim 1 expressly calls for <u>both</u> the image data and <u>additional information</u> to be <u>compressed</u>. In contrast, the priority information S40 is <u>not</u> compressed or encoded, only the image data S1A is compressed or encoded. After the image data S1A has been compressed or encoded, thereafter, the priority information S40 is written in the header portion H_A. "The image data S1A thus compressed and coded is given a header portion H_A for every data unit (e.g., one picture), as

shown in FIG. 5A, and is transmitted to the multiplexing section 33 (FIG. 4) as coded data S2A. At this time, the encoding section 30A writes the priority, which is specified by the priority information S40, as user data in a private data region of the header portion H_A of the coded data S2A determined by MPEG2 standard." (Paragraph [0039])(see also Paragraph [0041] which recites similar operations for the image data S1B having header portion H_B)

In addition, claim 1 is further distinguishable over Shiomoto et al. in that it calls for "wherein the additional information is placed at position values that do not occur in the data, and is located instead outside an area of the image array." The header portion H_A of the coded image data does not represent a location "outside an area of the image array." Most conventional messages or bitstreams have a header portion which represent a predetermined number of bits at the beginning of or preceding the data portion. This has no relevance to location relative to the area defined by the image array, much less, that such information is "outside an area of the image array."

Dependent Claim 2

Claim 2 further specifies "wherein the additional information has a position value of height h x width b of the image array $+k$, wherein k is a predefined value that indicates that a texture is included." Claim 1 specifies that a minimal size of the image array is defined by a height h and a width b of an image; while the additional information is located outside this area defined by the image array. Claim 2 further specifies that the location of the additional information has a very specific position value of "height h x width b of the image array $+k$." Shiomoto et al. discloses that the priority information is located in the <u>header</u> H_A of the coded image data. The header of the bitstream has absolutely nothing whatsoever to do with the location of the image array itself, nor what lies outside that area defined by the image array.

Dependent Claim 6

Claim 6 further specifies "wherein the <u>additional information comprises a header</u> that includes the properties of the texture and optionally one or more of fields of document format of the texture, position of the texture in the image/video array, size of the texture in the array, number of bytes required for transmission, part of the total texture, if the total texture must be

subdivided into several parts due to its size and additional fields for additional use." (emphasis added) In the previous rejection with respect to claim 1, from which claim 6 depends, the Examiner maintains that Shiomoto et al. teaches the limitation of "additional information" in the priority information written in the header H_A of the coded image data. In contrast to the present claimed invention which calls for the additional information _itself to have a header_, Shiomoto et al. teaches that the additional information may be _written in the header portion_ of the compressed image data. Shiomoto et al. is silent concerning whether the priority information (which the Examiner asserts is analogous to the claimed "additional information") itself has a header portion, as found in claim 6. Furthermore, Applicant submits that Shiomoto et al. and Kobayashi et al. are in non-analogous fields of art. Shiomoto et al. relates to an encoding method and apparatus; whereas Kobayashi et al. is directed to an information search apparatus and method for managing a plurality of kinds of multimedia information, and searching the desired multimedia information for desired multimedia information. The Examiner appears to have improperly pieced together the invention as claimed from the cited prior art using applicants' disclosure of the claimed invention as a template for suggesting to combine various individual elements of the prior art references. (see _W.L.Gore & Assoc., Inc. v. Garlock, Inc._, 721 F.2d 1540, 220 USPQ 303, 312 (Fed. Cir. 1983))

Independent Claim 10

Note that independent claim 10 was not rejected over the prior art of record. Claim 10 has some similar limitations to those in independent claim 1. Accordingly, Applicant has distinguished claim 10 over the prior art rejection of claim 1 set forth by the Examiner in the outstanding Office Action for reasons similar to those provided above with respect to claim 1.

A. §102(e) Rejection as Anticipated by Christopoulos et al.

Claim 10 calls for the step of "transmitting image data and additional information by prioritized transmission of compressed image data." The only mention of prioritization is with respect to selection by U_A of ROIs by the U_A assigning a significance value to each selected ROI. "[A]n IAS [Information Adaptive Service] may now be employed to _prioritize_ and/or limit the number of ROIs that were selected by U_A. As explained previously, the IAS performs this function based on the user preference information that resulted from U_A selecting the one or

more ROIs in step 502 and assigning each a significance value in step 503." This significance value assigned by the U_A to prioritize the ROIs selected by the U_A has nothing whatsoever to do with data compression. Instead, the only value that is taken into consideration during encoding (data compression) is the scaling value which is not disclosed as being prioritized, not the significance value that prioritizes the ROIs. "The TSS then encodes the image data, as indicated in step 505, where encoding may, once again, be achieved in accordance with the ROI coding feature of the JPEG2000 standard. As one skill in the art will readily appreciate, encoding will take into account the above-identified <u>scaling values</u>." Therefore, there is no disclosure to support that the prioritization of the ROIs as specified by the significance value is employed or taken into consideration during data compression (encoding), which would be necessary to read on claim 10.

Claim 10 further provides "arranging the additional information at position values outside the range of the image array." The Examiner maintains that a similar limitation in claim 1 is taught by Christopoulos et al. Specifically, the Examiner states that this claimed step is taught by Christopoulos et al. (Col. 12, lines 59-67). The passage in question reads "In accordance with this second scenario, and as illustrated in FIG. 6, the following operations are performed at the terminal employed by the sending end-user U_A. In step 601, U_A obtains the terminal capabilities associated with terminal B, in accordance with the appropriate protocol (e.g., CC/PP or SIP). U_A then selects one or more ROIs from the image and assigns to each a significance value, as shown in step 602. The image is then compressed, for example, using the JPE2000 standard, as shown in step 603. <u>The compressed data, along with the significance value associated with each of the selected ROIs, and the information and/or data that defines the capabilities of terminal B are multiplexed into a bitstream</u>, where the significance values and the terminal B capability information may be included as metadata, as for example, in the MPEG-7 standard. In step 604, the bitstream is transmitted to the transcoder." (emphasis added). Claim 10 expressly calls for "arranging the additional information at position values outside the range of the image array." The passage cited by the Examiner is silent as to the positioning of the significance value (which the Examiner maintains is analogous to the claimed "additional data"). Instead, the patent merely discloses that the significance value is multiplexed with the compressed data to generate a bitstream. There is no disclosure or suggestion as to the location of the significance data relative

to the position values in the image array, much less, as found in claim 10 that the additional data be located at position values outside the range of the image array.

In addressing this issue with respect to claim 1 the Examiner refers to another passage in Christopoulos et al. that states "The block labeled 'CONTENT DESCRITPIONS' represents the descriptions, i.e., meta-data associated with the various media objects stored in the content storage block. The content descriptions block might contain, for example, MPEG-7 description or JPEG2000 descriptions." (Col. 8, ll. 25-29) Thereafter, the Examiner concludes "clearly the compressed image data does not include the additional information such as significance values and terminal B capabilities and therefore these additional information do not occur in the data and is located instead outside an area of the image array." (July 1, 2008 Non-Final Office Action: p. 5, ll. 16-18) Previously the Examiner asserted that the "significance value" which is assigned by U_A is analogous to the claimed "additional information." Now, the Examiner appears to be referring to the 'CONTENT DESCRIPTIONS' as reading on the claimed "additional information." At no place in the patent is the significance value associated with the CONTENT DESCRIPTIONS. Therefore, it is unclear which information in the patent reads on the claimed "additional information." Furthermore, Applicant disagrees with the Examiner's assertion that the CONTENT DESCRIPTIONS and associated disclosure teaches that the additional information is located at position values outside the range of the image array. Christopoulos et al. that clarifies that "The block labeled 'CONTENT DESCRIPTIONS' represents one or more databases that contain descriptive information about the stored multimedia objects, such as MPEG descriptions associated with video objects, or JPEG descriptions associated with the still image objects." (Col. 7, ll. 50-56) Thus, no where in the patent is there any disclosure or suggestion of the 'CONTENT DESCRIPTIONS' being arranged at position values outside the range of the image array," as found in claim 10.

Lastly, claim 10 is further distinguishable over the prior art in that it calls for "<u>compressing</u> the image array containing <u>both</u> the image data of the pixel groups and the <u>additional information</u>." (emphasis added) Accordingly, both the image data of the pixel groups and the additional information are both compressed. In contrast, Christopoulos et al. discloses only encoding (compression) of the image data (Col. 12, ll. 7-10), but neither discloses nor suggests that additional information is also compressed, as found in claim 1. It is the Examiner's

position with respect to the prior art rejection of claim 1 reciting similar limitations that the "significance values" and "CONTENT DESCRIPTIONS" read on the claimed "additional information." However, neither the "significance values" nor the "CONTENT DESCRIPTIONS" are compressed along with the image data.

B. §102(e) Rejection as Anticipated by Shiomoto et al.

Claim 10 is further distinguishable over the prior art in that it calls for the step of "compressing the image array containing both the image data of the pixel groups and the additional information." (emphasis added) Accordingly, both the image data of the pixel groups and the additional information are both compressed. The Examiner maintains with respect to the similar limitations set forth in claim 1 that the header portion H_A of the compressed image data S1A represents the area outside the image array in which the claimed "additional information" is stored. The only thing stored in the header portion H_A is the priority information S40, and thus the Examiner appears to infer that the priority information S40 reads on the claimed "additional information." However, claim 10 expressly calls for both the image data and additional information to be compressed. In contrast, the priority information S40 is not compressed or encoded, only the image data S1A is compressed or encoded. After the image data S1A has been compressed or encoded, thereafter, the priority information S40 is written in the header portion H_A. "The image data S1A thus compressed and coded is given a header portion H_A for every data unit (e.g., one picture), as shown in FIG. 5A, and is transmitted to the multiplexing section 33 (FIG. 4) as coded data S2A. At this time, the encoding section 30A writes the priority, which is specified by the priority information S40, as user data in a private data region of the header portion H_A of the coded data S2A determined by MPEG2 standard." (Paragraph [0039])(see also Paragraph [0041] which recites similar operations for the image data S1B having header portion H_B)

In addition, claim 10 is further distinguishable over Shiomoto et al. in that it calls for "arranging the additional information at position values outside the range of the image array." The header portion H_A of the coded image data does not represent a location "outside the range of the image array." Most conventional messages or bitstreams have a header portion which represent a predetermined number of bits at the beginning of or preceding the data portion. This

has no relevance to location of such information relative to the image array, much less, "outside an area of the image array."

For the foregoing reasons, Applicant submits that claims 1-14 are patentable over the prior art of record and passage of the application to issuance is therefore requested.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,

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